County of Santa Cruz

HEALTH SERVICES AGENCY

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The Honorable John Laird
Santa Cruz County District Office
701 Ocean St., 318 B
Santa Cruz, CA 95060

State Capitol Office
P.O. Box 942849
Sacramento, CA 94249-0001

Re: Scope of the Proposed Environmental Impact Review of the Light Brown Apple Moth

Dear Assemblymember Laird:

This letter provides my comments as the County of Santa Cruz Health Officer on the scope of the Environmental Impact Report (EIR) for the California Department of Food and Agriculture (CDFA) 2008-09 action plan for the eradication/control of the light brown apple moth (LBAM) focusing on three aspects:

1. The potential health effects of any proposed eradication/control plan
2. The analysis of all available scientific evidence in order to assess the need for an eradication/control plan for LBAM and the potential efficacy of such a plan.
3. An analysis of the impact of last year's aerial spraying of Santa Cruz and Monterey Counties on LBAM reproduction and the essential elements of a health monitoring system that are necessary given Santa Cruz County's experience with aerial spraying of a pesticide.

The County of Santa Cruz is a mix of urban, suburban, rural, agricultural, and natural settings on the central coast of California. Agriculture represents a major industry for Santa Cruz County and 15% of our fruits and vegetables are organically grown. Our county is, by CDFA statistics, the most heavily infested county in California with the newly identified quarantinable pest, the light brown apple moth. Our county and Monterey County experienced extensive aerial spraying last November, 2007 with a chemical pheromone product resulting in over 600 recorded complaints from residents of adverse health effects resulting from exposure to the spray. We are therefore highly interested that the potential

health effects of whatever actions proposed for the eradication/control of LBAM be thoroughly investigated prior to exposing our population to risks that are unknown at this time.

We understand that the CDFA and USDA LBAM eradication/control plan is evolving and will involve multiple control modalities, but currently includes plans to conduct aerial spraying of LBAM pheromones over at least four counties, including ours, beginning in summer of 2008. The actual specific commercial product to be used in this spraying has yet to be chosen, thus an official toxicological review and a human health risk assessment have not been done.

There is growing public concern and opposition to aerial spraying. Cal EPA, the Office of Environmental Health Hazard Assessment (OEHHA), and the Department of Pesticide Regulation (DPR) have issued a consensus statement on "Human Health Aspects of the Aerial Application of Microencapsulated Pheromones to Combat the Light Brown Apple Moth".[1] The statement indicates that reported symptoms such as eye, skin, or respiratory irritation "could be consistent with inhalation of a sufficient amount of the applied material" but that because the measured application rate was very low, "it is likely that exposure occurred at levels below those that would be expected to result in health effects. However, because not all health effects can be predicted and because the general population includes susceptible populations, such as children, the elderly, and those with chronic diseases, we cannot provide a definitive cause for their symptoms."

While it is appreciated and understood that the selection of a pheromone for an eradication/control program may be the least potentially toxic alternative, public concern is focused around the inert ingredients involved, as well as its application by aerial spraying. Public Health officials in California have been told that there are no long-term studies to determine the effects of chronic exposure nor have these pheromone products ever been aerial sprayed over urban populations. We do not believe that any spraying should commence before completion of an EIR that includes a comprehensive human health assessment. We also believe that a proposed eradication/control program should provide all available scientific evidence and justification for the efficacy of control measures, including an analysis of the effects of last year's aerial spraying of Santa Cruz and Monterey Counties.

There is also considerable disagreement among credible scientists about the threat that LBAM poses. Experience in New Zealand has demonstrated that with strong integrated pest management, the damage to crops or natural foliage is far less than what CDFA predicts. In major agricultural regions in New Zealand, similar to California, LBAM is considered a minor pest. It does remain a pest of concern because it is a quarantine pest for exports. However, because of highly effective integrated pest management techniques, very few New Zealand fruit shipments are rejected by the U.S.[2]

Finally, once an eradication/ control program is formulated, it must include a robust monitoring system for human health effects. This would include training healthcare providers to become proficient at systematically examining patients and collecting necessary information to better assess the possible effects of pesticide/chemical exposures. A fund or funding mechanism should be established

[1] http://www.panna.org/documents/lbamPheromones20071116.pdf

[2] Harder, D, Rosendale, J; *Integrated Pest management Practices for the Light Brown Apple Moth in New Zealand: Implications for California;* March 2008

to provide payment for medical evaluation and treatment. Continuation of an anecdotal complaint driven system may still be necessary, however it should be married to a monitoring system that tracks healthcare utilization and health outcomes data.

In summary, while we understand the CDFA's position that early and aggressive intervention has the potential to eradicate LBAM in California, we also acknowledge that the proposed eradication/control strategies involve new and untested technologies for which the risks and benefits to human health have yet to be evaluated. We also acknowledge the great public concern about the risks of aerial spraying and the growing skepticism about the need for such a program. We therefore ask that the following issues be incorporated fully into the proposed EIR:

1. CDFA complete its environmental review before the implementation of any further eradication/control plans.
2. Currently, CDFA is considering only one control plan in addition to the no-project alternative. Given public controversy surrounding aerial application, CDFA should identify, consider, and analyze other additional alternative programs of control that limit aerial application in urban areas. All available scientific information, including an analysis of the efficacy of last year's aerial spraying in Monterey and Santa Cruz Counties, should be used to formulate and justify proposed efficacy of a program. The program description and alternatives should provide all available evidence for the efficacy of control modalities in each of the geographical contexts where CDFA anticipates using that modality. More specifically, given the limited history of pheromone use in urban settings, CDFA should consider how factors specific to in urban environments such as building heights, paved surfaces, limited vegetation, and urban canyons might affect the efficacy of treatment modalities or influence choice of modalities.
3. The control alternative describes six control modalities but does not describe how CDFA will utilize and blend control modalities in specific geographical contexts. The description of the project and alternatives should describe the criteria CDFA will use to use or blend specific control modalities in specific geographic contexts. CDFA should describe how factors such as climate, population density, building heights, or urbanization will be used to select specific modalities.
4. CDFA proposed to conduct a human health risk assessment within the CEQA process. Given that public controversy largely concerns human health risks, the risk assessment should be conducted independent from the CEQA process by a qualified state agency. We recommend that the State of California Environmental Protection Agency Office of Environmental Health Hazard Assessment (OEHHA) conduct the risk assessment considering all modalities proposed in the action plan, utilizing oversight by experts in relevant disciplines, and considering how human health hazards may vary depending on context. CDFA should ensure that local public health officials participate in oversight and peer-review of the risk assessment. The EIR can reference this risk assessment. The human health risk assessment should specifically consider:
    a. Effects of the product, the active and inert ingredients, alone and in mixture;
    b. Effects related to the microcapsule carrier (e.g. respirability, toxicity)
    c. Atmospheric behavior of the product (dispersion patterns)
    d. Persistence in the environment (e.g., is the product biodegradable)
    e. Cumulative effects on other regulated or non-regulated pollutants
    f. Potential routes of human exposure (e.g., ingestion, inhalation, dermal absorption)
    g. Anticipated concentrations in various environmental media—air, water, surface residues

h. Development of risk quotients relating anticipated dose to a dose known to be toxic, particularly in relation to chronic or cumulative exposure.
i. Variations in potential exposure due to geography, built environmental form, and meteorology.
j. Existence of populations that may be particularly sensitive to the application

5. To respond to and mitigate public concerns, CDFA proposes to work with CDPH to implement a monitoring program to pro-actively track potential health effects of control measures. While complaint tracking is appropriate to identify new or unsuspected exposure-disease relationships, the tracking of existing health care utilization and health outcomes data may provide an additional approach to monitor population health effects. Types of data that may be productively utilized include emergency room visits and school attendance.
6. Monitoring of human health effects must also include systemized collection of health data and exposure data from health professionals that is more specific than the current Pesticide Illness Report system. This would necessarily involve training and outreach to health professionals to be able to examine for and assess the potential exposure effects. A fund should be established to provide payment for clinical care and laboratory diagnosis.
7. Environmental impacts should be assessed in conjunction with regional water quality control boards and air quality management districts, the Bay Conservation and Development Commission, the State Lands Commission, the State Coastal Commission, The Department of Fish and Game, the U.S. Fish and Wildlife Service, among others.

Sincerely,

Poki Namkung, MD, MPH
Health Officer

cc: Susan A. Mauriello, County Administrative Officer
County Counsel